Please amend the claims as follows (this listing of claims replaces all prior versions):

1 – 34. (Canceled)

35. (New) A data recording element comprising:

a plurality of multiple-layer structures wherein each of said plurality of multiple-layer structures comprises of a plurality of layers of phase change materials;

a first layer of each of said plurality of layers being a first phase change material;

a second layer of each of said plurality of layers being a second phase change material having at least one atomic element absent from said first phase change material;

an initial layer of phase change material that is a first layer of said plurality of layers of a first one of said plurality of multiple-layer structures;

a final layer of phase change material over a final one of said plurality of multiple-layer structures wherein said phase change material of said initial layer and said phase change material of said final layer have a lower crystallization temperature and a higher crystallization speed than phase change materials in a remainder of said plurality of layers in each of said plurality of multiple-layer structures.

36. (New) The data recording element of claim 35 further comprising:

a one of said plurality of multiple-layer structures including a first plurality of layers disposed in a sequence; and

a second one of said plurality of multiple-layer structures including a second plurality of layers disposed in said sequence.

37. (New) The data recording element of claim 35 further comprising:

a one of said plurality of multiple-layer structures including a first plurality of layers disposed in a first sequence; and

a second one of said plurality of multiple-layer structures including a second plurality of layers disposed in a second sequence.

38. (New) The data recording element of claim 35 further comprising:

each layer of said plurality of layers in each of said plurality of multiple-layer structures having a thickness in a range of about 0.1 nm to about 10 nm.

39. (New) The data recording element of claim 35 wherein said plurality of layers in each of said multiple-layer structures comprise:

a first one of said plurality of layers has a first thickness; and

a second one of said plurality of layers has said first thickness.

40. (New) The data recording element of claim 35 wherein said plurality of layers in each of said multiple-layer structures comprise:

a first one of said plurality of layers; and

a second one of said plurality of layers adjacent said first one of said plurality of layers wherein a ratio of thickness of said second one of said plurality of layers to said first one of said plurality of layers is between about 0.1 and 10.

41. (New) The data recording element of claim 35 wherein said data recording element has a total thickness of about 5 nm to about 500 nm.

42. (New) The data recording element of claim 35 wherein said data recording element has a total thickness of about 5 nm to about 100 nm.

43. (New) The data recording element of claim 35 wherein said final layer and each of said plurality of layers in each of said multiple-layer structures comprises:

a material selected from a group consisting of: Ge, Te, Sb, GeTe, SbTe, AgIn, Ge, Sb, Te, AgInSbTe, TeAsGe, TeSeS, TeSeSb, InSbTe, TeGeSn, In, Cr, N, Se, Sn, Si, Bi, and Ag.

44. (New) The data recording element of claim 35 further comprising:

a layer selected from one of said final layer and each of said plurality of layers in each of said multiple-layer structures that is in a crystalline state when deposited.

45. (New) The data recording element of claim 35 further comprising:

a layer selected from one of said final layer and each of said plurality of layers in each of said multiple-layer structures that has a lower resistance in said crystalline state than in an amorphous state.

46. (New) The data recording element of 35 wherein said crystallization temperature of said phase change material of said initial layer and said phase change material of said final layer is in a range from about 90 degrees Celsius to about 120 degrees Celsius.

47. (New) The data recording element of claim 35 further comprising:

a superlattice-like structure formed from said plurality of multiple-layer structures and said final layer.

48. (New) A memory cell comprising:

a substrate;

a first contact formed over said substrate;

a plurality of multiple-layer structures over said first contact wherein each of said plurality of multiple-layer structures comprises of a plurality of layers of phase change materials;

a first layer of each of said plurality of layers being a first phase change material;

a second layer of each of said plurality of layers being a second phase change material having at least one atomic element absent from said first phase change material;

an initial layer of phase change material that is a first layer of said plurality of layers of a first one of said plurality of multiple-layer structures;

a final layer of phase change material over a final one of said plurality of multiple-layer structures wherein said phase change material of said initial layer and said phase change material of said final layer have a lower crystallization temperature and a higher crystallization speed than phase change materials in a remainder of said plurality of layers in each of said plurality of multiple-layer structures; and

a second contact formed over said final layer.

49. (New) The memory cell of claim 48 further comprising:

a layer of insulating material between said first contact and said substrate.

50. (New) The memory cell of claim 48 further comprising:

an insulating material that isolates said memory cell from an adjacent memory cell.

51. (New) The memory cell of claim 48 further comprising:

a one of said plurality of multiple-layer structures including a first plurality of layers disposed in a sequence; and

a second one of said plurality of multiple-layer structures including a second plurality of layers disposed in said sequence.

52. (New) The memory cell element of claim 48 further comprising:

a one of said plurality of multiple-layer structures including a first plurality of layers disposed in a first sequence; and

a second one of said plurality of multiple-layer structures including a second plurality of layers disposed in a second sequence.

53. (New) The memory cell of claim 48 further comprising:

each layer of said plurality of layers in each of said plurality of multiple-layer structures having a thickness in a range of about 0.1 nm to about 10 nm.

54. (New) The memory cell of claim 48 wherein said plurality of layers in each of said multiple-layer structures comprise:

a first one of said plurality of layers has a first thickness; and

a second one of said plurality of layers has said first thickness.

55. (New) The memory cell of claim 48 wherein said plurality of layers in each of said multiple-layer structures comprise:

a first one of said plurality of layers; and

a second one of said plurality of layers adjacent said first one of said plurality of layers wherein a ratio of thickness of said second one of said plurality of layers to said first one of said plurality of layers is between about 0.1 and 10.

56. (New) The memory cell of claim 48 wherein said data recording element has a total thickness of about 5 nm to about 500 nm.

57. (New) The memory cell of claim 48 wherein said data recording element has a total thickness of about 5 nm to about 100 nm.

58. (New) The memory cell of claim 48 wherein said final layer and each of said plurality of layers in each of said multiple-layer structures comprises:

a material selected from a group consisting of: Ge, Te, Sb, GeTe, SbTe, AgIn, Ge, Sb, Te, AgInSbTe, TeAsGe, TeSeS, TeSeSb, InSbTe, TeGeSn, In, Cr, N, Se, Sn, Si, Bi, and Ag.

59. (New) The memory cell of claim 48 further comprising:

a layer selected from one of said final layer and each of said plurality of layers in each of said multiple-layer structures that is in a crystalline state when deposited.

60. (New) The memory cell of claim 48 further comprising:

a layer selected from one of said final layer and each of said plurality of layers in each of said multiple-layer structures that has a lower resistance in said crystalline state than in an amorphous state.

61. (New) The memory cell of claim 48 wherein said crystallization temperature of said phase change material of said initial layer and said phase change material of said final layer is in a range from about 90 degrees Celsius to about 120 degrees Celsius.

62. (New) The memory cell of claim 48 further comprising:

a superlattice-like structure formed from said plurality of multiple-layer structures and said final layer.